BEFORE THE DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION OF THE STATE OF MONTANA

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IN THE MATTER OF THE HORSE CREEK AREA PETITION NO. 43C 30006730 FOR DESIGNATION OF A CONTROLLED GROUNDWATER AREA	)))	**ORDER DESIGNATING TEMPORARY CONTROLLED GROUNDWATER AREA**

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Pursuant to the Montana Water Use Act, Mont. Code Ann. §§ 85-2-506 and 507, and to the contested case provisions of the Montana Administrative Procedures Act, and after notice required by law, a hearing was held on October 9, 2003, in Columbus, Montana, to determine if DNRC shall order the area in question to be a controlled groundwater area, a temporary controlled groundwater area pending further study, or reject the petition for a controlled groundwater area (CGA). The DNRC has considered all evidence submitted and all testimony given concerning the Petition.

PARTIES

All individuals who signed the Petition, testified at the hearing, or submitted written comment prior to the record closing are considered Parties. Approximately 30 people attended the hearing. Proponents of the proposed controlled groundwater area designation who testified at the hearing were: Kevin Chandler, Katrin Chandler, Polly Rex, Bill Gates, Kim Witt, Joe Flannagan, Torian Donohoe, and Tom Osborn. Marcus Arthurn testified in opposition to increased water use associated with subdivision development but expressed concern about having to comply with the permitting process to obtain new water rights. Opponents who testified at the hearing were: Roger Perkins. Bobbi M. Frazer of the Tolliver Law Firm P.C. served as legal counsel for the opponents at the hearing. Written comments regarding the proposed controlled groundwater designation were received prior to the hearing from Roxie and Anthony Hamilton, property owners in the Crow Chief Meadows

Subdivision. They expressed concern that they did not receive notice of the hearing, having heard of the hearing from neighbors. Individuals who submitted written comments regarding the proposed controlled groundwater designation at the hearing were: Katrin R. Chandler on behalf of Jacob Peter Eggers, Polly R. Rex, and Paul and Kathy Donohoe. DNRC received a letter dated October 8, 2003 from Betty Jane Lannen and Mary Jane Alstad on October 14, 2003. The letter expressed opposition to increased water usage from the Crow Chief Meadows Subdivision and included as an attachment a copy of a May 31, 2000 letter to Stillwater County Commissioners by Lannen and Alstad expressing concerns with the proposed subdivision. The October 8, 2003 letter was received after the record was closed. However, the May 31, 2000 letter is already part of the public record regarding the subdivision and neither letter presented any new information regarding the proposed controlled groundwater area.

EXHIBITS

Written information received at the hearing and the allowed post hearing responses were assigned a sequential exhibit number by the Hearing Examiner. There are fourteen (14) such documents.

Exhibit 1 is a topographic map (1:12000 scale) of the proposed petition area vicinity with locations of wells and springs, submitted by the petitioners.

Exhibit 2 is a series of 21 photographs of the Horse Creek Area submitted by the petitioners.

Exhibit 3 is 24 pages of information from the Montana Bureau of Mines and Geology (MBMG)Ground Water Information Center website regarding wells and well logs in the Horse Creek area, and one page containing a copy of a card noting a measurement of well #185284 taken on August 5, 2003, all submitted by the petitioners.

Exhibit 4 is a letter and attachment (4 pages total) from Betty Landen.

Exhibit 5 is a report titled "Summary of the Horse Creek Controlled Groundwater Area Hydrogeologic Evaluation October 2001-October 2003" by HydroSolutions Inc, which includes a Graph of Sodium

Distribution, submitted by the Petitioners.

Exhibit 6 is a topographic map (1:12000 scale) of the proposed petition area vicinity showing surface geology and location of wells and springs, submitted by the petitioners.

Exhibit 7 is titled "Plans For Monitoring Horse Creek Groundwater Area" submitted by the petitioners.

Exhibit 8 is a statement of qualifications and experience of Roger J. Perkins, P.E, submitted by counsel for the opponents.

Exhibit 9 is titled "Crow Chief Meadows Water Levels", submitted by Roger Perkins for the opponents.

Exhibit 10 is a plat map of the Crow Chief Meadows Subdivision, submitted by the opponents.

Exhibit 11 is titled "Environmental Assessment and Community Impact For Crow Chief Meadows" by Brown and Associates, submitted by the opponents.

Exhibit 12 is titled "Water Weir Readings - Horse Creek on Crow Meadows Proposed Subdivision July 8, 1999 to December 10, 1999 and April 12, 2001 to July 15, 2001", submitted by the opponents.

Exhibit 13 is snowfall and precipitation data for Fishtail, MT, submitted by the petitioners.

Exhibit 14 is a memo from Russell Levens, DNRC Hydrogeoloist containing a written evaluation of the evidence presented regarding the proposed Horse Creek Controlled Groundwater Area dated October 22, 2003. In addition, Katrin R. Chandler read into the record "Horse Creek, A Brief History" dated September 28, 2003 written by her father, Jacob Peter Eggers and submitted a copy with attachments in a notebook to the Hearings Examiner. Polly Rex read a letter dated October 9, 2003 into the record regarding springs on her property and submitted a copy to the Hearings Examiner. These letters are a part of the record.

Petition documents and DNRC processing documents (e.g., Environmental Assessment [EA]) are already a part of the record and are not labeled as exhibits.

ISSUES

The Petition alleges: a) groundwater withdrawals are in excess of recharge to the aquifer or aquifers within the groundwater area; b) that excessive groundwater withdrawals are very likely to occur in the near future because of consistent and significant increases in withdrawals from within the ground water area; (c) that significant disputes regarding priority rights, amounts of groundwater in use by appropriators, or priority of type of use are in progress within the ground water area; (d) that ground water levels or pressures in the area in question are declining or have declined excessively; and (g) that water quality within the ground water area is not suited for a specific beneficial use as defined in MCA 85-2-102(a).

The Petition proposes that: (1) all new groundwater developments (wells and developed springs), regardless of the flow rate and volume, and replacement wells would require a Beneficial Water Use Permit or Change of Use Authorization from DNRC prior to drilling; and, (2) the area be closed to all new groundwater developments in the case that the use of any such new developments adversely impact the water quality or quantity of the existing water users. (Petition)

PRELIMINARY MATTERS

The Exhibits log prepared after the hearing lists Exhibit 6 as Graph of Sodium Distribution. This graph is actually a part of Exhibit 5. Exhibit 6 is a map showing Horse Creek Geology with Spring and Well Locations. The Exhibits log lists Exhibit 8 and 10 as Roger Perkin's CV. Exhibit 10 should be, and now is, listed as Crow Chief Meadows Subdivision Map.

The record was left open for DNRC Hydrogeologist and staff expert Russell Levens' written evaluation of the technical evidence in the record, including that received and presented at the hearing. Mr. Levens' report was received on October 24, 2003 and is included in the record as Exhibit 14. Copies of the report can be requested by contacting DNRC's Water Resources Division Central Office(406.444.6615), 1424 Ninth Avenue, Helena, MT.

FINDINGS OF FACT

1. A Petition for Controlled Groundwater Area (Petition) was filed with DNRC on September 19, 2001. The Petition was submitted by a group of landowners from the Horse Creek Area, with Kevin Chandler listed as the spokesperson for the group. Additional information was provided by the petitioners through their consultant, HydroSolutions, Inc., on March 5, 2002. Following receipt of this information and field review with the petitioners and their consultant on March 20, 2002, DNRC judged the petition as adequate to proceed to hearing (DNRC file).

2. The proposed controlled groundwater area is located southwest of Absarokee, MT and consists of approximately 4600 acres and is described as: the following tracts within Township 4 South, Range 18 East as designated in Attachment 1, Horse Creek Controlled Groundwater Area Map: S½S½SW¼, S½SW¼SE¼ Section 2; S½S½S½, W½W½ Section 3; That portion of Section 4 lying east of Grove Creek Road in S½ and E½NE¼; That portion of Section 9 lying east of Grove Creek Road; Section 10; W½, W½E½ Section 11; W½, W½NE¼, NW¼SE¼ Section 14; Section 15; Section 16; N½ Section 21; and N½ Section 22. (Petition)

3. A Notice of Hearing On Petition For Designation of a Controlled Groundwater for the Horse Creek area was published in the Helena *Independent Record* September 3, 10, and 17 and the *Stillwater County News* on September 4, 11, and 18, 2003, setting forth the Petition, the alleged reasons for the Petition, the legal description of the proposed controlled groundwater area, and the time, place, and purpose of the hearing. Additionally, DNRC served notice by first class mail on 52 individuals and public agencies that DNRC determined might be interested in or affected by the proposed controlled groundwater area. The notice also stated that any interested person could appear, either in person or by attorney, file written objections to the granting of the proposal, and be fully heard. (DNRC file.)

4. The proposed CGA boundary was drawn to include the wells and springs that the petitioners determined may be affected by groundwater development in the Crow Chief Meadows subdivision. (Testimony of Proponents)

5. The primary sources of water for wells and springs in the proposed CWA are either the upper Tongue River Member of the Fort Union Formation or the underlying Tullock Member of the Fort Union Formation. These two members(aquifers) are separated by the Lebo Member, which is predominately clay and commonly does not provide a source of groundwater. The proposed CGA is dissected by a fault that runs north and south through the central portion of the proposed CGA. Springs in the proposed CGA occur primarily in the Tongue River Member near the contact with the Lebo Member or in proximity of the fault line. The Tullock Member serves as the principal aquifer for wells in the vicinity of the Crow Chief Meadows Subdivision. (Testimony of Proponents & Levens 10/22/03 memo)

6. There is an apparent hydrologic connection between the Tullock Aquifer and Horse Creek along the fault that bisects the proposed CGA. This is evidenced by the water chemistry data that shows Horse Creek and springs in the vicinity of Horse Creek to be a mix of shallow aquifer water and deeper Tullock Aquifer groundwater. (Testimony of Proponents and Levens 10/22/03 memo)

7. Contamination of the Tullock Aquifer from septic system effluent is not likely due to the artesian pressure of the aquifer restricting downward movement of contaminants. (Testimony of Proponents)

8. The Borland Minor Subdivision and the Crow Chief Meadows Subdivision (subdivision) have been approved by the Stillwater County Commissioners and combined total 65 residential lots. The lots are to be served by individual wells and septic systems. Only a few of the lots have been developed. Exhibit 1 shows 7 wells within the subdivision area. Not all of these wells are currently being used.

Therefore, increased groundwater withdrawals are likely to occur in the near future as more of the approved homesites are developed. (Testimony of Proponents)

9. Although the sodium absorption ratio of the groundwater in the vicinity of the subdivision is high, the groundwater is considered suitable for domestic use. (Testimony of Proponents and Opponents and Levens 10/22/03 memo)

10. Extensive use of groundwater for lawn irrigation within the subdivision may require frequent applications of agricultural lime to avoid grass kill because of the effects of the groundwater on the soil resulting from the high sodium absorption ratio. (Petition)

11. Accumulation of salts in the root zone due to irrigation with groundwater in the subdivision may reduce or restrict ability to support grass and may require soil amendments or leaching to maintain a lawn. (Testimony of Opponents)

12. Groundwater is presently being used for lawn irrigation within the subdivision. (Testimony of Proponents)

13. Static water level in the Chandler and Witt wells is being monitored by the MBMG. The data for each of the wells consists of eleven measurements taken over a thirteen-month period between August 2002 and September 2003. Fluctuations in the static water level is noted, but it is unclear if this is due to normal seasonal fluctuations, pumping, drought, or a combination of these and other factors. (Exhibit 3 & Testimony of Proponents)

14. Discharge for eight springs has been measured sporadically and reported over the period October 2001 and October 2003. No consistent trend that might suggest that groundwater levels are declining is noted in the data. (Exhibit 5 & Testimony of Proponents)

15. Static water level has been measured three times on three wells in the Subdivision (Lots 8, 36, 39), once in 1997, 2001, and 2003. No substantial change in static water level that might suggest groundwater levels have declined excessively was noted. (Exhibit 9 & Testimony of Opponents)

16. The proposed CGA has been subject to several years of below normal precipitation and the cumulative departure from normal precipitation is approximately eleven inches below normal since December 2000. (Exhibit 5 & Testimony of Proponents)

17. Two years of record of static water level measurements for the two wells monitored by MBMG would not be adequate data to establish trends, determine statistical significance, or account for drought impacts. (Testimony of Proponents)

18. Groundwater level data and spring flow data presented by the petitioners are insufficient to distinguish trends in groundwater levels due to development or other causes within the proposed CGA. (Levens 10/22/03 memo)

19. No information or testimony was presented regarding disputes over priority of type of use or that amount of use exceeds appropriation rights. (Petition and testimony)

20. The opponents' analysis of the effects on water levels resulting from pumping at the Crow Chief Meadows subdivision does not consider the effect of aquifer boundaries, the relationship between water level changes and spring or stream flows, the long term removal of water from aquifer storage, or the demand resulting from lawn irrigation. (Levens memo 10/22/03)

21. The expert witness for the opponents generally agreed with the aquifer recharge rate offered by the petitioners' expert witness. The expert witnesses disagreed on the area of recharge, the potential for

deeper aquifer influence, and influence of seepage from alluvium. (Levens 10/22/03 memo)

22. Existing withdrawals within the proposed controlled groundwater area are 76% to 126% of recharge, based on the designation of the recharge area, a recharge rate of 4.6% of average annual precipitation, and estimated withdrawals. The demand of the subdivision at build-out will be 118% to 197% of recharge. The margin of error in the recharge calculations range from 10% to 100% and should be considered preliminary estimates. (Testimony of Proponents)

23. The absolute numerical estimates of groundwater recharge and withdrawal within the proposed CGA are in question. However, the available evidence indicates that existing withdrawals may exceed recharge and future water withdrawals might exceed available supply. (Levens 10/22/03 memo)

24. "Plans For Monitoring Horse Creek Groundwater Area" was submitted by petitioners, proposing a 10 point plan for monitoring water quality and quantity of surface and groundwater, including submittal of an annual report of data collected to DNRC and all water users. See Attachment 2. (Exhibit 7 & Testimony of Proponents)

Based upon the foregoing Findings of Fact, the Hearing Examiner makes the following:

CONCLUSIONS OF LAW

1. DNRC has jurisdiction over the parties and over the subject matter herein. Mont. Code Ann. §§ 85-2-506 and 507. See Findings of Fact No. 1,2.

2. DNRC gave proper notice of the hearing and substantive procedural requirements of law or rule have been fulfilled. See Findings of Fact 1,2,3; Mont. Code Ann. § 85-2-506(5).

3. DNRC shall declare the area in question to be a controlled groundwater area if DNRC finds the public health, safety, or welfare requires corrective controls to be adopted; **and** 1) there is wasteful use of water from existing wells or undue interference with existing wells, 2) any proposed use or well will impair or substantially interfere with existing rights to appropriate surface water or groundwater by others; **or** 3)if facts alleged in the petition, as required by 85-2-506(2), are true. Mont. Code Ann. 85-2-507(2).

4. The evidence shows the public health, safety, or welfare of the groundwater users in the proposed CGA is of concern because groundwater withdrawals may presently, or when approved homesites are occupied, exceed recharge and available supply. However, facts are insufficient at this time to require permanent controls to be adopted on this basis. See Finding of Fact Nos. 17, 18, 21, 22, 23. Mont. Code Ann. 85-2-507(2)(a).

5. The evidence does not show there is a wasteful use of water from existing wells or undue interference with existing wells. The evidence does show decrease in water level in the Chandler well and decreased flow in some springs, but there is not sufficient information to determine that these variations are the result of increased groundwater use. See Finding of Fact Nos.13, 14, 15, 16, 17, 18, 19, 20. Mont. Code Ann. 85-2-507(2)(b)(i).

6. The evidence is not sufficient to show that any proposed use or well will impair or substantially interfere with existing rights to appropriate surface water or groundwater by others. The evidence indicates that future groundwater use may exceed supply and supports a connection between the Tullock Aquifer and Horse Creek springs, but is not sufficient at this time to require permanent controls. See Finding of Fact Nos.5, 6, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23.

Mont. Code Ann. 85-2-507(2)(b)(ii).

7. The amount of recharge and existing and proposed withdrawals are not known. Until the relationship between recharge, discharge and use are better understood and reasonable estimates can be made, it cannot be determined if groundwater withdrawals are presently, or will, at full build-out of the subdivision, exceed recharge or supply. See Finding of Fact Nos. 20, 21, 22, 23. Mont. Code Ann. 85-2-506(2)(a).

8. The evidence indicates potential for increased demand and uncertainty about supply. Whether development will result in excessive withdrawals cannot be determined until aquifer recharge and discharge relationships are better understood. A conclusion that excessive groundwater withdrawals are very likely to occur cannot be reached without additional information. See Findings of Fact Nos. 5, 6, 8, 17, 18, 23. Mont. Code Ann. 85-2-506(2)(b).

9. The evidence is not sufficient to support occurrence of significant disputes regarding priority of rights, amount of groundwater in use by appropriators, or priority of type of use. See Findings of Fact Nos. 19. Mont. Code Ann. 85-2-506(2)(c).

10. The evidence is not adequate to show that groundwater levels or pressures are declining or have declined excessively. See Findings of Fact Nos. 13, 14, 15, 17, 18. Mont. Code Ann. 85-2-506(2)(d)

11. The evidence is not adequate to show that groundwater is not suitable for the intended beneficial uses, which include domestic and irrigation of lawn and garden. See Finding of Fact Nos.9, 10, 11, 12. Mont. Code Ann. 85-2-506(2)(g).

12. When a controlled groundwater area is designated, a person may only appropriate groundwater by applying for and receiving a permit according to Title 85,Chapter 2, Part 3 of the Montana Codes. However, DNRC may not grant a permit if the withdrawals would be beyond the capacity of the aquifer or aquifers in the CGA to yield groundwater within a reasonable or feasible pumping lift (in the case of pumping developments) or within a reasonable or feasible reduction of pressure (in the case of artesian developments). Mont. Code Ann. 85-2-508.

13. Temporary controlled groundwater areas are allowed only when there are not sufficient facts to designate or modify a permanent controlled groundwater area. A temporary controlled groundwater area may be designated to allow for studies to determine if a permanent controlled groundwater area is necessary. The circumstances here are appropriate for a temporary designation. There is indication that a permanent controlled groundwater area may be needed at some point in the future, but sufficient facts that would allow DNRC to designate a controlled ground water area are not yet available. Mont. Code Ann. 85-2-507 (2)&(5).

14. A temporary controlled groundwater area can only be established for two years and DNRC can extend the period for one additional two-year period. If the studies require more than four years, it may be necessary to re-establish the proposed CGA after four years. Mont. Code Ann. 85-2-507(5).

15. Establishing a temporary controlled groundwater area can eliminate the exception from permitting requirements typically enjoyed by small uses of groundwater, including single households found at Mont. Code Ann. § 85-2-306. Generally, pursuant to that statute groundwater appropriations that do not exceed 35 gallons per minute and 10 acre feet per year do not require a permit from DNRC. Also,

change authorizations for replacement wells are usually not required if certain requirements are met. Mont. Code Ann. 85-2-402(15). In a temporary controlled groundwater area, however, controls can require all new appropriations to apply for and obtain a permit, Mont. Code Ann. §§ 85-2-508; 85-2-507 (4), (5), and replacement wells may require DNRC's approval. Mont. Code Ann § 85-2-402(15)(a)(i)(A)&(B).

16. All applicants for new permits and change authorizations and testing and monitoring wells in a temporary controlled groundwater area can be required to submit or allow to be gathered information such as lithologic logs, water level measurements, water chemistry, aquifer test data, and well construction details. On-going monitoring of withdrawals and static water level for new permits can be required on a case-by-case basis where such information may be necessary to establish the criteria in Mont. Code Ann. 85-2-507(4)(g).

17. At this time, sufficient facts are not available to designate a permanent controlled ground water area as petitioned for (Mont. Code Ann. § 85-2-507(5)(a)). However, the Department can by order and does designate the area in question to be a temporary controlled ground water area requiring the permitting of all new wells within the temporary controlled groundwater area. DNRC may waive public notice on applications if, on the basis of information reasonably available to it, the appropriation as proposed in the application will not adversely affect the rights of other persons or be contrary to the intent of this order. Mont. Code Ann. § 85-2-307(3).

Based upon the foregoing Findings of Fact and Conclusions of Law, the Hearing Examiner makes the following:

ORDER

1. A temporary controlled groundwater area is designated for an area of approximately 4600 acres within the S½S½SW¼, S½SW¼SE¼ Section 2; S½S½S½, W½W½ Section 3; that portion of Section 4

lying east of Grove Creek Road in S½ and E½NE¼; that portion of Section 9 lying east of Grove Creek Road; Section 10; W½, W½E½ Section 11; W½, W½NE¼, NW¼SE¼ Section 14; Section 15; Section 16: N½ Section 21; and N½ Section 22. The exact boundary is shown on the attached map (Attachment 1).

2. The purpose of the designation is for gathering information on aquifer properties, aquifer recharge, and aquifer withdrawals to assist in determining if a permanent controlled groundwater area is warranted. With this temporary controlled ground water designation, all new uses of groundwater and replacement wells in the designated area must obtain a new water use permit or change authorization from DNRC.

3. New groundwater appropriators and those seeking to drill replacement wells in the area must first apply to DNRC's Billings Water Resources Regional Office for a provisional water use permit or change authorization prior to drilling a well. After review of the application, DNRC will issue a license for drilling and testing purposes conditioned to allow the applicant and DNRC to gather data and information necessary for completing the application for permit or change authorization. A license to drill is required for wells that are drilled for testing or monitoring that would otherwise be exempt from permit requirements pursuant to A.R.M. 36.12.106. Testing of the aquifer will be conducted to prove physical and legal availability, to determine potential for adverse effects, or to otherwise meet the conditions of this order. The license may be conditioned to require: five day advanced notice of drilling to DNRC; specific yield and drawdown test requirements, including, but not limited to, pumping rate and duration; specific aquifer test requirements, including, but not limited to, pumping rate, duration, and designation of monitoring wells; static water level measurements; specific

parameters for water chemistry analysis; and any other requirements deemed necessary by DNRC.

4. Water users should consult and work with DNRC in collecting, compiling, organizing, archiving, and interpreting area-wide information. This includes, but is not limited to, collecting and compiling data from existing wells, springs, and Horse Creek and provide this information to DNRC Billings Regional Office annually, as described in Exhibit 7, Plans For Monitoring Horse Creek Groundwater Area, items 3, 6, 7, 8, & 10. (See Attachment 2).

5. All new provisional water use permits and change authorizations will be conditioned to require: in-line flow meter installed; annual reporting of volume of water used as measured by an in-line flow meter; an access tube (3/4 inch minimum diameter) to allow static water level measurements to be taken quarterly and reported annually; and, access for DNRC staff to the well for purposes of monitoring, conducting tests, and taking measurements.

6. For all new wells, the applicant must submit the following to DNRC Billings Regional Office within 30 days of drilling: name of applicant; well log; the DNRC water right or change authorization number; the name of the driller; the legal location of the well; a map showing the location of the well; well construction standards used; and all information required as a condition of the license to drill.

7. If at any time during the term of the temporary controlled groundwater area sufficient facts becomes available to show withdrawals have, or are about to, exceed recharge, the temporary groundwater area can be designated permanent and modified to include appropriate controls after notice and hearing as provided in Mont. Code Ann. 85-2-507(5)(b).

8. The DNRC may enforce this order and bring action for an injunction in a district court of a district in which all or part of the area affected is located, in addition to all other remedies, as provided in Mont. Code Ann. 85-2-507(6).

APPEALS

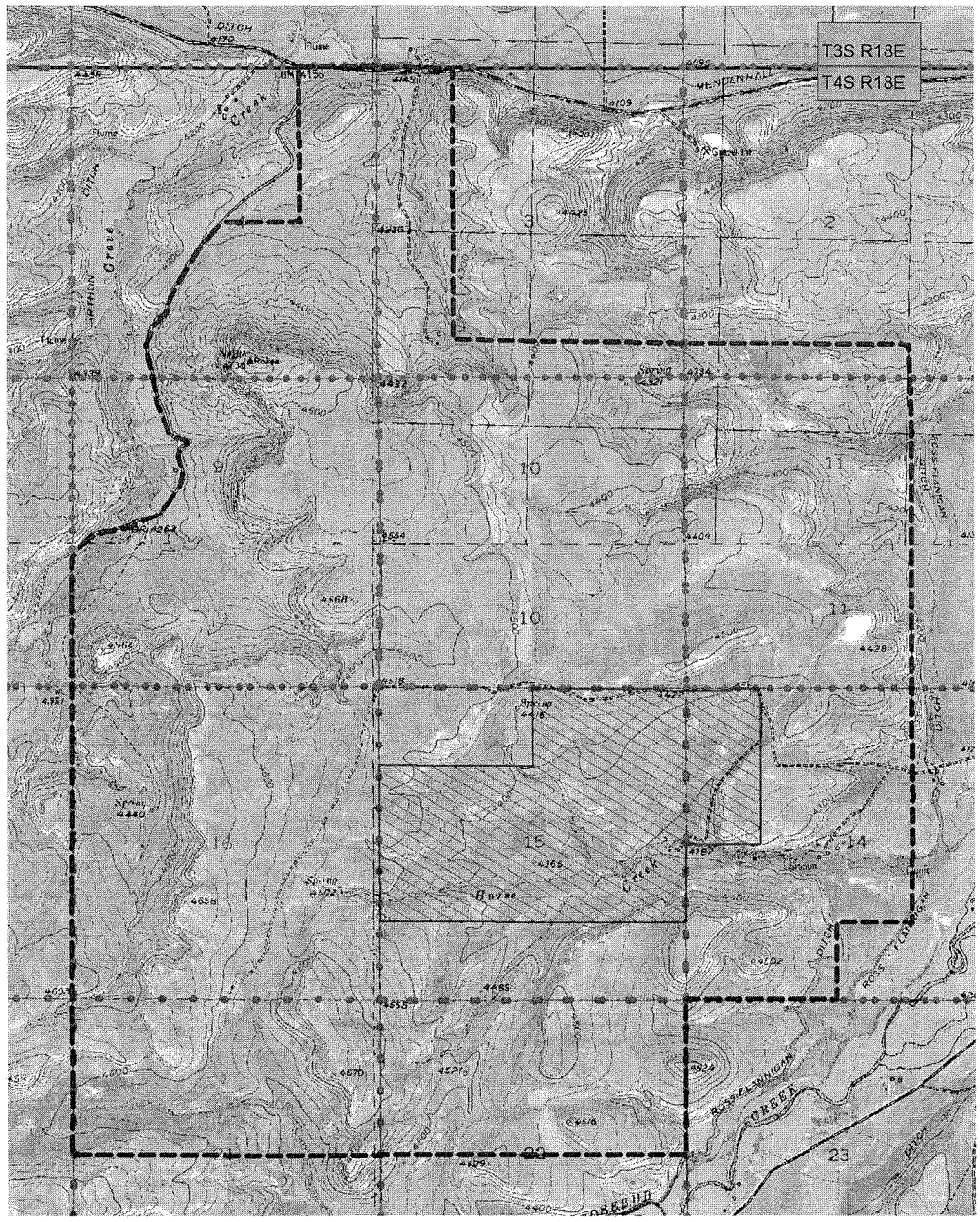
DNRC's Order may be appealed in accordance with the Montana Administrative Procedures Act by filing a petition in the appropriate court within 30 days after service of the Order. If a petition for judicial review is filed, DNRC will transmit a copy of the tape of the oral proceedings to the district court along with documentary evidence in the file. If a party to the proceeding elects to have a written transcript prepared, that party may purchase the tapes and have a transcript prepared.

Dated this 12th day of February, 2004.

William J. Schultz
Hearing Examiner
Water Resources Division
Department of Natural Resources & Conservation
P.O. Box 5004
Missoula, MT 59802

ATTACHMENT 1

HORSE CREEK TEMPORARY CONTROLLED GROUNDWATER AREA
STILLWATER COUNTY, MONTANA
T4S R18E



Note: Subdivision boundary, USGS orthophoto and (or) topographic quadranges and township and range data acquired from the Montana State Library Natural Resources Information repository; proposed controlled groundwater area boundary from the Department of Natural Resources and Conservation Water Resources Division.
Map developed at the DNRC Water Resources Division, December 2003.